



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,682	04/20/2001	Lawrence E. Albertelli	FS-00495 (02890029AA)	8968

30743 7590 06/29/2005

WHITHAM, CURTIS & CHRISTOFFERSON, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

EXAMINER

HO, TUAN V

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,682

Applicant(s)

ALBERTELLI, LAWRENCE E.

Examiner

Tuan V. Ho

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2615

1. Applicant's arguments filed 2/15/05 have been fully considered but they are not persuasive.

With regard to claims 12-19, Applicant argues:

1) Ikurumi et al. does not teach any control of the conveyor such that the critical alignment required in Kedar et al. could be maintained and for which the doubly telecentric lens arrangement is used therein. Again, such a modification is directly contrary to the teachings of Kedar et al. and would render the apparatus of Kedar et al. inoperative for the intended purpose. In response to the arguments, the examiner notes that Ikurumi et al teaches in Fig. 6, using an inspection system that includes belt conveyer 2, video camera 3 and determination control unit 10; where image signals of a printed circuit board on belt 2 derived from an image sensor of camera 3 by a processing circuit, are provided to control unit for a determination of boards (col. 7, lines 36-67). In addition, Kedar suggest that the camera system can be used in a conveyer belt (Col. 4, lines 19-21). As a result, the combination of Kedar et al. in view of Hippenmeyer and Ikurumi et al. would give the same operation of claimed machine vision.

2) Ikurumi et al. is concerned with the inspection of similar articles and thus is not concerned with accommodating different distances between the surface to be imaged and the

Art Unit: 2615

optical system in regard to focus, magnification or resolution sized but only with coordinating the object motion with a line scan image sensor to obtain orthogonal scanning of the object surface. In response to the arguments the examiner notes that the arguments of distances, focus or magnification are not relevant since claim 12 does not recite any of the limitations.

With regard to claims 18 and 19, it should be noted that articles of irregular sized are inherently in the inspection of operation of machine of Kadar in view of Hippenmyer et al. and Ikurumi et al.

With regard to claimed "zip code" of claim 19, the examiner notes that the rejection is clearly discussed in paragraph 5 of the last office action.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 12-17 are rejected under 35 U.S.C. 103(a) as being

Art Unit: 2615

unpatentable over Kedar et al in view of Hippenmeyer further in view of Ikuzumi et al.

With regard to claim 12, in the camera system of Kedar et al in view of Hippenmeyer as discussed with respect to claim 2, the camera system discloses the means for processing data derived from the sensor (the processing circuit that is camera system inherently includes a used to process raw image signals from the CCD sensor into video signal so as to display on a monitor in order that a use can observe the object and make any adjustments with a operation unit); furthermore, Kedar et al discloses the doubly telecentric system can be used in a robot or conveyer belt (col. lines'19-21), except that a controllable means and data derived from the to the controllable means.

image sensor is fed Kedar et al in view of Hippenmeyer does not explicitly disclose any controllable means and processed image data fed to the controllable means. However, Ikurumi et al teaches in Fig. 6, using an inspection system that includes belt conveyer 2, video camera 3 and determination control unit 10; where image signals of a printed circuit board on belt 2 derived from an image sensor of camera 3 by a processing circuit, are provided to control unit for a determination of boards (col. 7, lines 36-67).

Therefore, it would have been obvious to one of ordinary

Art Unit: 2615

skill in the art at the time the invention was made to modify the camera system Kedar et al in view fashion as disclosed by Ikurumi et al of Hippenmeyer as the same so as to obtain a machine vision controlled system including a controllable means and processing means because the modification of the camera system of Kedar et al in view of Hippenmeyer would allow a user to inspect an object with high degree of accuracy.

With regard to claim recites what was discussed with respect to claim 10.

With regard to claim 14, Furthermore, Ikuzumi teaches using determination control unit the mounting condition of other words, a character that can recognize whether or not a printed circuit board is good. In condition of a printed circuit board is recognized by determination unit 10.

With regard to claim Furthermore, Kedar et al discloses the doubly telecentric system can be used in a robot or conveyer belt (col. 4, lines 19-21).

With regard to claim 16, Hippenmeyer discloses a plane mirror (col.3, line 21) as discussed with respect to claim

With regard to claim 17, furthermore, Kedar et al discloses the doubly telecentric system that includes a focus detection arrangement as discussed with respect to claim 10.

With regard to claim 18, method claim 18 recites what was

Art Unit: 2615

discussed with respect to apparatus claim 12. Furthermore, a printed circuit board inherently includes visible electrical components that are used by determination control unit so as to make a determination if the board is good (col. 7, lines 60-67).

It should be noticed that claimed "imaging the visible information on each article at **substantially constant magnification and resolution**" is inherent in the operation of the system of Kedar in view of Hippenmeyer et al. and Ikurumi et al. since in a camera inspection system, a user must activate a control circuit in order to change the magnification of lens system and resolution of image sensor of a camera; otherwise, the magnification and resolution is always the same under a normal camera operation. As a result, when there is no need to change the magnification or resolution of the system, a user can keep the magnification and resolution of the camera system at a constant value.

With regard to claim 19, the camera system of Kedar et al in view of Hippenmeyer further in view of Ikurumi et al does not disclose any visible information that is a zip-code.

Official Notice is taken for an article labeled with a zip-code so as to be able to recognize by an inspection system in order to correctly distribute the article to a desired address. Therefore, it would have been obvious to one of ordinary

Art Unit: 2615

skill in the art at the time the invention was made to incorporate a zip-code label on a printed circuit board of the camera system of Kedar et al in view of Hippenmeyer and Ikuzumi et al so as to easily to distribute to an address with higher degree of accuracy.

3. Claims 1-11 are allowed.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

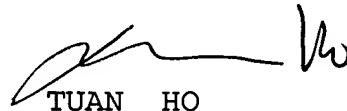
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2615

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN HO whose telephone number is (571) 272-7365. The examiner can normally be reached on Mon-Fri from 7AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is (572) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service whose telephone number is (571) 272-2600.



TUAN HO

Primary Examiner

Art Unit 2615